A new BLS satellite series: inputs to industry price indexes

The Bureau of Labor Statistics (BLS) is producing an experimental set of satellite inputs to industry price indexes. These indexes measure price change for the net inputs consumed by most 3-digit North American Industry Classification System (NAICS) industry groupings, excluding capital investment and labor. The new satellite series are not official statistics and are separate from the existing official Producer Price Index (PPI) inputs to industry series. These satellite series, however, improve upon the existing inputs to industry indexes by adding prices for imported inputs from the Import Price Index. The satellite indexes also cover a far larger portion of the economy than the official input indexes, which are only available for construction industries and a very limited number of mining, manufacturing, and services industries. The new satellite series are available at the Satellite Input to Industry Series link below.

Satellite Input to Industry Series (.xlsx)

The table includes all historical data available. (In most cases, the indexes began in December 2018.) Each month, after the Producer Price Index and Import Price Index data releases, the table will be updated with new data for the current period and revised data for the four months prior to the current period. Data in the table are to the third decimal place level of precision.

Note that PPI currently publishes official input indexes for NAICS 231, 232, 484, and 813, which overlap with the domestic portions of the satellite series for those same codes. To provide as much information as possible, the domestic portions of the satellite index series for NAICS 231, 232, 484, and 813 were made continuous with their official counterparts. For that reason, the domestic portions of those categories have different base dates from the other portions of the categories and additional historical data is available for those series.

Methodology

The satellite BLS net inputs to industry indexes measure the average change in prices industries pay for inputs, excluding capital investment and labor. These indexes contrast with PPI’s currently published net inputs to industry indexes because they include prices for both domestically produced and imported inputs to industries, while the currently published net inputs to industry indexes only include prices for domestically produced inputs.

To construct an overall input to industry index, two separate indexes are first calculated: one measuring price change for domestically produced inputs and the other measuring price change for imported inputs. Producer Price Index commodity indexes are used to construct the domestic portion of the overall index and Import Price Indexes are used to construct the imported portion of the index. The two indexes are then aggregated to an overall price index that measures price change for inputs to the industry sector, regardless of their country of origin.

Publication Structure

The BLS satellite inputs to industry price indexes are available for most 3-digit NAICS industry groups. (Input indexes are not calculated for 3-digit industry groups where prices for substantial portion of an industry group’s inputs are not available.) For each 3-digit industry grouping, an aggregate index measuring price change for all inputs consumed by the industry group, excluding capital investment and labor, is published. BLS also publishes separate sub-aggregate indexes measuring price change for domestically produced inputs consumed by the industry group, as well as, for imported inputs. Final breakdowns under the domestic sub-aggregate are published for goods, services, and construction products consumed by the industry group. In cases where the industry does not consume a sufficient quantity of a specific good, service, or construction category, no index is produced for that grouping. An example of the publication structure is presented below.

Example structure

<table>
<thead>
<tr>
<th>Example</th>
<th>Title</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inputs to 327, nonmetallic mineral product mfg, excluding capital investment and labor</td>
<td>IN327</td>
<td></td>
</tr>
<tr>
<td>Inputs to 327, domestically produced goods</td>
<td>IN3271</td>
<td></td>
</tr>
<tr>
<td>Inputs to 327, domestically produced services</td>
<td>IN32711</td>
<td></td>
</tr>
<tr>
<td>Inputs to 327, domestically produced maintenance and repair construction</td>
<td>IN32713</td>
<td></td>
</tr>
<tr>
<td>Inputs to 327, imported goods</td>
<td>IN3272</td>
<td></td>
</tr>
</tbody>
</table>

Data uses

There are at least four potential uses for the satellite input indexes: industry cost analysis, price transmission analysis, contract escalation, and deflation.

- **Industry cost analysis**: Calculating the percent change in index levels between two periods provides a measure of the change in an industry's input costs, excluding labor and capital investment, between those two periods.
- **Price transmission analysis**: The causal relationship between input and output prices for an industry group can be analyzed by comparing BLS input and output price indexes for the industry group.
- **Contract price adjustment**: The inputs to industry indexes offer parties an additional source of data to use for contract price adjustment that may provide a better fit to address their contracting needs.
- **Deflator**: The input indexes can serve as proxy deflators in situations where no output or consumer price indexes are available.
Additional Information

- For information on Input Index methodology, see the Monthly Labor Review article, "A new BLS satellite series of net inputs to industry price indexes: methodology and uses," or contact the PPI Section of Index Analysis and Public Information at: ppi-info@bls.gov or (202) 691-7705.
- For a list of Input index components and their relative weights, see Input index relative importance table (.xlsx).

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